

Technical Procedures for Processing with Amido Black (Fischer 98)

1 Scope

Amido Black (Fischer 98) is a process used by FBI Laboratory Friction Ridge Discipline personnel to develop latent prints and enhance visible prints that have been deposited in blood. The process can be used on all surfaces but is primarily used on non-porous items.

2 Limitations

The background of porous items may become stained during the process and obscure information.

On clear or light colored surfaces, the alternate solution with Tween 20 may stain the background more than the standard version with Photo-Flo 600.

3 Equipment/Materials/Reagents

Distilled water

Water (for rinse)

Naphthol Blue Black (dye content $\geq 85\%$)

5-Sulfosalicylic Acid (purity $\geq 99\%$)

Formic Acid (concentrated)

Sodium Carbonate

Photo-Flo 600 Solution

Tween 20

N-dodecylamine Acetate

Glacial Acetic Acid

4 Procedures

4.1 Solution Preparation

Personnel will prepare the solutions as follows. Alternative amounts may be prepared, provided the same ratio of chemicals mixed is retained.

4.1.1 Standard Developer Solution

- Combine the following:
 - Naphthol Blue Black - 3 g
 - Glacial Acetic Acid - 50 ml
 - Distilled water - 500 ml
 - 5-Sulfosalicylic Acid - 20 g
 - Sodium Carbonate - 3 g
 - Formic Acid - 50 ml
 - Photo-Flo 600 Solution - 12.5 ml
- Stir solution until Naphthol Blue Black dissolves (approximately 30 minutes).
- Raise final volume to approximately 1000 ml with distilled water.

Note: Solution can be used immediately with acceptable results but works best if mixed and stored in a bottle several days before use.

4.1.2 Alternate Developer Solution

Photo-Flo 600 may be replaced with 125ml of Tween 20 detergent solution.

Personnel will combine the following, stir until all chemicals dissolve, and add to standard developer solution in place of the Photo-Flo 600 solution:

- n-Dodecylamine Acetate - 3 g
- Tween 20 - 4 g
- Distilled water - 1000 ml

4.2 Application

Personnel will complete the following steps in order:

1. Apply developer solution to the item by spraying, dipping, painting, or squirting. The application of the solution can be isolated by using a durable tissue material. The durable tissue material is placed on the item over the area to be processed. The solution is then applied to the material.
2. Leave developer solution on the item for 3 to 5 minutes.
3. Rinse with water.

4. Allow the item to dry.

The developer solution may be reapplied as needed by repeating steps 1 through 3 until no further development is seen. Personnel will be cautious of overdevelopment and destruction of background.

For digital capture and photography, see FBI Friction Ridge Discipline Processing Manual, Preamble.

4.3 Storage of Solution

Developer solution may be stored in any type of laboratory accepted receptacle.

4.4 Shelf Life

Developer solution has an indefinite shelf life provided the reagent checks are satisfactory.

5 Standards and Controls

See FBI Friction Ridge Discipline Processing Manual, Preamble.

6 Safety

See FBI Laboratory Safety Manual for appropriate information.

7 Sampling

Not applicable.

8 Calculations

Not applicable.

9 Measurement Uncertainty

Not applicable.

10 References

FBI Laboratory Safety Manual, Federal Bureau of Investigation, Laboratory Division. Latest Revision.

FBI Friction Ridge Discipline Processing Manual, Preamble, Federal Bureau of Investigation, Laboratory Division. Latest Revision.

Sears, V. G. and Prizeman, T. M. "Enhancement of Fingerprints in Blood - Part 1: The Optimization of Amido Black". *JFI*.50(5):470.

Trozzi, T. A., Schwartz, R. L., and Hollars, M. L. *Processing Guide for Developing Latent Prints*, FBI Laboratory, Washington DC, 2001.

Rev. #	Issue Date	History
2	10/02/17	Updated to add Biometrics Analysis Unit.
3	07/15/21	Replace Latent Print Units with Friction Ridge Discipline. Minor wording changes. Streamline equipment list. Change tissue to durable tissue material. Re-organization and re-numbering of sections. Section 1, removed blood fixer reference and added surfaces. Section 2, added limitations. Section 4.1, divided concept into two separate sections, Section 4.1.1 and Section 4.1.2 and added option on alternate amounts. Section 4.2, added reapplication allowance. Section 5, added Preamble reference.

Approval

Redact - Signatures on File

Friction Ridge Discipline
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Date: 07/14/2021

Latent Print Operations
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Date: 07/14/2021

Latent Print Support Unit
Chief

Date: 07/14/2021

Scientific and Biometrics
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